

ABSTRACT

A method for structuring video by probabilistic merging of video segments includes the steps of obtaining a plurality of frames of unstructured video; generating video segments from the unstructured video by detecting shot boundaries based on color dissimilarity between consecutive frames; extracting a feature set by processing pairs of segments for visual dissimilarity and their temporal relationship, thereby generating an inter-segment visual dissimilarity feature and an inter-segment temporal relationship feature; and merging video segments with a merging criterion that applies a probabilistic analysis to the feature set, thereby generating a merging sequence representing the video structure. The probabilistic analysis follows a Bayesian formulation and the merging sequence is represented in a hierarchical tree structure.

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